

AMENDMENTS TO THE CLAIMS:

Amend the claims as follows:

1.(original) An oscillator circuit comprising a first LC-oscillator and a second LC-oscillator, the first LC-oscillator comprising a resonance inductor, the second LC-oscillator comprising a resonance inductor, the first LC-oscillator and the second LC-oscillator having substantially the same fundamental frequencies, characterized in that the resonance inductor of the first LC-oscillator is coupled by mutual inductance to the resonance inductor of the second LC-oscillator, to thereby enable the first LC-oscillator and the second LC-oscillator to frequency lock to each other.

2.(currently amended) The oscillator circuit according to claim 1, ~~characterized in that~~wherein the oscillator circuit comprises a third LC-oscillator, the third LC-oscillator comprising a resonance inductor, and in that the resonance inductor of the third LC-oscillator is coupled by mutual inductance to at least one of the other resonance inductors of the other LC-oscillators.

3.(currently amended) The oscillator circuit according to claim 2, ~~characterized in that~~wherein the oscillator circuit comprises a fourth LC-oscillator, the fourth LC-oscillator comprising a resonance inductor, and in that the resonance inductor of the fourth LC-oscillator is coupled by mutual inductance to at least one of the other resonance inductors of the other LC-oscillators.

4.(currently amended) The oscillator circuit according to claim 1,  
~~characterized in that~~wherein the oscillator circuit comprises an arbitrary number of  
further LC-oscillators, each further LC-oscillator comprising a resonance inductor, and in  
that each of the resonance inductors of the further LC-oscillators is coupled by mutual  
inductance to at least one of the other resonance inductors of the other LC-oscillators.

5.(currently amended) The oscillator circuit according to ~~any one of claims 1~~  
~~to 4~~claim 1, ~~characterized in that~~wherein the mutual inductance coupling between the  
resonance inductors of the LC-oscillators is achieved by at least partly intertwining the  
inductor windings of the respective resonance inductors which are inductively coupled by  
mutual inductance.

6.(currently amended) The oscillator circuit according to ~~any one of claims 1~~  
~~to 5~~claim 1, ~~characterized in that~~wherein the LC-oscillators have substantially identical  
circuitry.

7.(currently amended) The oscillator circuit according to ~~any one of claims 1~~  
~~to 6~~claim 1, ~~characterized in that~~wherein a fundamental frequency of the LC-oscillators is  
substantially a same frequency for all of the LC-oscillators.

8.(currently amended)      The oscillator circuit according to ~~any one of claims 1 to 7~~ claim 1, ~~characterized in that~~ wherein the LC-oscillators are differential LC-oscillators, where each differential LC-oscillator comprises at least one fundamental frequency AC-ground due to the differential symmetry.

9.(currently amended)      An oscillator arrangement comprising a first oscillator circuit and a second oscillator circuit, each oscillator circuit being according to claim 8, ~~characterized in that~~ wherein the oscillator arrangement comprises a first AC coupling between one of the at least one fundamental frequency AC-ground points of the first oscillator circuit and one of the at least one fundamental frequency AC-ground points of the second oscillator circuit, thus locking the first oscillator circuit to the second oscillator circuit.

10.(currently amended)      The oscillator arrangement according to claim 9, ~~characterized in that~~ wherein the first oscillator circuit and the second oscillator circuit are substantially identical.

11.(currently amended)      The oscillator arrangement according to claim 10, ~~characterized in that~~ wherein the first AC coupling is between a first fundamental frequency AC-ground point of the first oscillator circuit and a first fundamental

frequency AC-ground point of the second oscillator circuit, the first fundamental frequency AC-ground points being identical fundamental frequency AC-ground points.

12.(currently amended)    The oscillator arrangement according to claim 11, ~~characterized in that~~wherein the oscillator arrangement comprises a second AC coupling between a second fundamental frequency AC-ground point of the first oscillator circuit and a second fundamental frequency AC-ground point of the second oscillator circuit, the second fundamental frequency AC-ground points being identical fundamental frequency AC-ground points.

13.(currently amended)    ~~The oscillator arrangement according to any one of claims 9 to 11, characterized in that~~ The oscillator arrangement comprises a third oscillator circuit according to claim 8.

14.(currently amended)    The oscillator arrangement according to claim 13, ~~characterized in that~~wherein the first AC coupling is further AC coupled to a first fundamental frequency AC-ground point of the third oscillator circuit.

15.(currently amended)    The oscillator arrangement according to claim 13, ~~characterized in that~~wherein the oscillator circuit comprises a second AC coupling between a second fundamental frequency AC-ground point of the first oscillator circuit

and a second fundamental frequency AC-ground point of the third oscillator circuit, the second fundamental frequency AC-ground points being identical fundamental frequency AC-ground points and separate from the first fundamental frequency AC-ground points.

16.(currently amended)     The oscillator arrangement according to ~~any one of claims 13 to 15~~claim 13, ~~characterized in that~~wherein the third oscillator circuit has substantially a same fundamental frequency as the first and second oscillator circuits.

17.(currently amended)     The oscillator arrangement according to ~~any one of claims 13 to 15~~claim 13, ~~characterized in that~~wherein the third oscillator circuit has a fundamental frequency which is substantially twice the frequency as the fundamental frequencies of the first and second oscillator circuits.

18.(currently amended)     ~~The oscillator arrangement according to any one of claims 13 to 17, characterized in that~~ The oscillator arrangement comprises a fourth oscillator circuit according to claim 8.

19.(currently amended)     The oscillator arrangement according to claim 18, ~~characterized in that~~wherein the first AC coupling is further AC coupled to a first fundamental frequency AC-ground point of the fourth oscillator circuit.

20.(currently amended) The oscillator arrangement according to claim 18, ~~characterized in that~~wherein the oscillator arrangement further comprises a third AC coupling between a fundamental frequency AC-ground point of the second oscillator circuit being separate from the first fundamental frequency AC-ground point of the second oscillator circuit and a corresponding fundamental frequency AC-ground point of the fourth differential oscillator.

21.(currently amended) The oscillator arrangement according to ~~any one of claims 18 to 20~~claim 18, ~~characterized in that~~wherein the fourth oscillator circuit having a fundamental frequency which is substantially the frequency of the fundamental frequency of the first and second oscillator circuit.

22.(currently amended) The oscillator arrangement according to ~~any one of claims 18 to 20~~claim 18, ~~characterized in that~~wherein the fourth oscillator circuit having a fundamental frequency which is substantially twice the frequency of the fundamental frequency of the first and the second oscillator circuit.

23.(currently amended) The oscillator arrangement according to ~~any one of claims 18 to 20~~claim 18, ~~characterized in that~~wherein the fourth oscillator circuit having a fundamental frequency which is substantially twice the frequency of the fundamental frequency of the third oscillator circuit.

24.(currently amended) The oscillator arrangement according to ~~any one of~~  
~~claims 9 to 23~~claim 9, characterized in that wherein one AC coupling between two  
fundamental frequency AC-ground points, is further coupled to a voltage source via an  
AC-impedance element.

25.(currently amended) The oscillator arrangement according to ~~any one of~~  
~~claims 9 to 23~~claim 9, characterized in that wherein one AC coupling between two  
fundamental frequency AC-ground points, is further coupled to ground via an AC-  
impedance element.

26.(currently amended) The oscillator arrangement according to ~~any one of~~  
~~claims 9 to 25~~claim 9, characterized in that wherein one AC coupling between two  
fundamental frequency AC-ground points is a direct coupling.

27.(currently amended) The oscillator arrangement according to ~~any one of~~  
~~claims 9 to 25~~claim 9, characterized in that wherein one AC coupling between two  
fundamental frequency AC-ground points is a resistive coupling.

28.(currently amended) The oscillator arrangement according to ~~any one of claims 9 to 25~~claim 9, characterized in that wherein one AC coupling between two fundamental frequency AC-ground points is a capacitive coupling.

29.(currently amended) An oscillator arrangement comprising an arbitrary number of oscillator circuits, each oscillator circuit being according to claim 8, ~~characterized in that~~wherein the oscillator arrangement comprises an arbitrary number of AC couplings between fundamental frequency AC-ground points of the oscillator circuits, thus frequency locking the oscillator circuits.

30.(currently amended) A communication unit, characterized in that the communication unit comprises an oscillator circuit according to ~~any one of claims 1 to 8~~claim 1.

31.(currently amended) A communication unit, characterized in that the communication unit comprises an oscillator arrangement according to ~~any one of claims 9 to 28~~claim 9.

32.(currently amended) A method of frequency locking a first LC-oscillator to a second LC-oscillator, ~~characterized in that~~wherein the method comprises coupling by



JACOBSSON, H. et al.  
Appl. No. To be assigned  
January 5, 2004

mutual inductance a resonance inductor of the first LC-oscillator with a resonance inductor of the second LC-oscillator.